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| 23623 | 7590 | 10/13/2005 | EXAMINER | |
| AMIN & TUROCY, LLP 1900 EAST 9TH STREET, NATIONAL CITY CENTER 24TH FLOOR, CLEVELAND, OH 44114 | | | WONG, EDNA | |
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| | | | 1753 | |

DATE MAILED: 10/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/772,595

Applicant(s)

BOKISA ET AL.

Examiner

Edna Wong

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>June 10, 2005</u> | 6) <input type="checkbox"/> Other: _____ |

This is in response to the Amendment dated September 28, 2005. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

Specification

The disclosure has been objected to because of minor informalities.

The objection of the disclosure has been withdrawn in view of Applicants' amendment.

Claim Objections

Claims **2-5, 10-12, 15-16 and 19-21** have been objected to because of minor informalities.

The objection of claims 2-5, 10-12, 15-16 and 19-21 has been withdrawn in view of Applicants' amendment.

Claim Rejections - 35 USC § 112

Claims **3-4, 8, 11-15 and 20-21** have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejection of claims 3-4, 8, 11-15 and 20-21 rejected under 35 U.S.C. 112,

second paragraph, has been withdrawn in view of Applicants' amendment.

Double Patenting

Claims **1-23** have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of copending Application No. 10/772,473.

The rejection of claims 1-23 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of copending Application No. 10/772,473 has been withdrawn in view of Applicants' Terminal Disclaimer.

Claim Rejections - 35 USC § 102

Claims **1-4** have been rejected under 35 U.S.C. 102(b) as being anticipated by **JP 10-245693** ('693).

The rejection of claims 1-4 under 35 U.S.C. 102(b) as being anticipated by JP 10-245693 ('693) has been withdrawn in view of Applicants' amendment.

Claim Rejections - 35 USC § 103

I. Claims **5-8** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 10-245693** ('693) as applied to claims 1-4 above, and further in view of **Hui** (US Patent No. 6,372,118 B2).

The rejection of claims 5-8 under 35 U.S.C. 103(a) as being unpatentable over

JP 10-245693 ('693) as applied to claims 1-4 above, and further in view of Hui has been withdrawn in view of Applicants' amendment.

II. Claims **9-13 and 15-17** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 10-245693** ('693).

The rejection of claims 9-13 and 15-17 rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-245693 ('693) has been withdrawn in view of Applicants' amendment.

III. Claim **14** has been rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 10-245693** ('693) as applied to claims 9-13 and 15-17 above, and further in view of **Hui** (US Patent No. 6,372,118 B2).

The rejection of claim 14 under 35 U.S.C. 103(a) as being unpatentable over JP 10-245693 ('693) as applied to claims 9-13 and 15-17 above, and further in view of Hui has been withdrawn in view of Applicants' amendment.

IV. Claims **18-23** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 10-245693** ('693).

The rejection of claims 18-23 under 35 U.S.C. 103(a) as being unpatentable over JP 10-245693 ('693) has been withdrawn in view of Applicants' amendment.

Response to Amendment

Terminal Disclaimer

The terminal disclaimer filed on September 28, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application Number 10/772,473 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Objections

Claim **15** is objected to because of the following informalities:

Claim 15

line 2, the word "slected" should be amended to the word -- selected --.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claim **6** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6

lines 4-5, it appears that the "at least one brightener" is the same as the at least one acetylenic brightener recited in claim 1, lines 4-5. However, it is unclear if it is.

Claim Rejections - 35 USC § 103

I. Claims **1-6, 8 and 24** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 10-245693** ('693) in combination with **Passal** (US Patent No. 3,697,391).

JP '693 teaches a method of electroplating a quaternary alloy comprising nickel and cobalt, comprising:

(a) providing an electroplating bath comprising:

(i) an anode;

(ii) a cathode (= an electronic part);

(iii) water (= from water-soluble salt);

(iv) ionic nickel (= from a nickel salt);

(v) ionic cobalt (= from a water-soluble salt of cobalt);

(vi) at least two ionic alloy metals (= from a water-soluble salt of B, Co, Cu, Fe, Mn, P, Sn and/or Zn); and

(vii) at least one brightener (= a heterocyclic quaternary ammonium compound); and

(b) applying a current (page 4, Table, "A/dm²") to the electroplating bath whereby the quaternary alloy comprising nickel, cobalt, and at least two alloy metals forms on the cathode (abstract; and page 1, [0001] and [0007]).

The at least two ionic alloy metals comprise at least two metals selected from the group consisting of B, Cu, Fe, Mn, Sn and Zn in ionic form (abstract; and page 1,

[0007]).

The electroplating bath further comprises at least one sulfur containing brighteners selected from the group consisting of sulfinic acids, sulfonic acids, aromatic sulfonates, aromatic sulfinates, sulfonamides, sulfonimides, sulfimides, and sulfo-betaines (= sulfonic acids and aromatic sulfonates) [abstract; page 1, [0007]; and page 1, claim 1].

The electroplating bath has a pH from about 2 to about 6 (= pH 3-10) [abstract; and page 1, [0007]] and a temperature from about 10°C to about 90°C (page 3, Table, "°C").

The electroplating bath comprises from about 0.001% to about 5% by weight of at least one brightener (= 0.01 g/l to 1 g/l) [page 2, [0015]].

The method of JP '693 differs from the instant invention because JP '693 does not disclose the following:

a. Wherein the at least one brightener is an acetylenic brightener, as recited in claim 1.

Passal teaches that acetylenic compounds are primary brighteners (col. 3, lines 3-31) used in typical nickel-containing, cobalt-containing and nickel-cobalt-containing bath compositions (col. 6, lines 30-38).

Passal teaches a process for the production of sound electrodeposits containing nickel and/or cobalt over a wide range of concentrations of primary brighteners and/or

metallic impurities (col. 2, lines 22-30). The impurities may be introduced when commercial grade salts are used to prepare the bath composition, or the metallic impurities may occur as a result of dissolution of parts which may fall into the plating bath composition during the plating process (col. 1, lines 68-72).

Passal teaches that the substrates on which the nickel-containing, cobalt-containing and nickel-cobalt-containing electrodeposits may be applied may be metal or metal alloys such as brass, bronze, and zinc-base die castings (col. 2, line 60 to col. 3, line 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method described by JP '693 with wherein the at least one brightener is an acetylenic brightener because acetylenic compounds are primary brighteners used in typical nickel-containing, cobalt-containing and nickel-cobalt-containing bath compositions as taught by Passal (col. 3, lines 3-31; and col. 6, lines 30-38). When used alone or in combination, they may produce semi-lustrous, fine-grained deposits (col. 3, lines 24-31).

Passal teaches electrodepositing a quaternary alloy. Passal teaches that metallic impurities may occur as a result of dissolution of parts which may fall into the plating bath composition during the plating process (col. 1, lines 68-72). Thus, this would have suggested that when a bronze cathode is used, one having ordinary skill in the art would have expected that the electrodeposit would have contained copper and tin that was fallen into the plating bath composition from dissolution of the bronze cathode.

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b. Wherein the acetylenic brightener is selected from the group consisting of acetylenic alcohols, acetylenic amines, acetylenic esters, acetylenic sulfonic acids and sulfonates, alkoxyated acetylenic alcohols, and acetylenic carboxylic acids, as recited in claim 3.

c. Wherein the acetylenic brightener is selected from the group consisting of ethoxylated butynediol; 2-butyne-1,4-diol; propargyl alcohol; ethoxylated propargyl alcohol; hydroxyethyl propynyl ether; beta-hydroxypropyl, propynyl ether; gamma-propynyloxy, bis-beta-hydroxyethyl ether 2-butyne-1,4-diol; bis-beta-hydroxypropyl ether 2-butyne-1,4-diol; 1,4-di-(beta-hydroxyethoxy)-2-butyne; 1,4-di-(beta-hydroxy-gamma-chloropropoxy)-2-butyne; 1,4-di-(beta-gamma-epoxypropoxy)-2-butyne; 1,4-di-(beta-hydroxy-gamma-butenoxy)-2-butyne; 1,4-di-(2'-hydroxy-4'-oxa-6'-heptenoxo)-2-butyne; 2,4,6-trimethyl N-propargyl pyridinium bromide; 2-methyl-3-butyne-2-ol; 1-(beta-hydroxyethoxy)-2-propyne; and 1-(beta-hydroxypropoxy)-2-propyne, as recited in claim 24.

Passal adds effective amounts of at least one member selected from the group of cooperating additives consisting of:

- (a) a primary brightener;
- (b) a secondary brightener;
- (c) a second auxiliary brightener, and
- (d) an anti-pitting agent (col. 2, lines 41-47)

to **typical** nickel-containing, cobalt-containing and nickel-cobalt-containing bath

compositions (col. 6, lines 30-38).

Examples of a primary brightener are 2,4,6-trimethyl N-propargyl pyridinium bromide, 2-butyne-1,4-diolpropargyl alcohol and 2-methyl-3-butyn-2-ol (col. 3, lines 3-31).

Examples of a secondary brightener are aromatic sulfonates, sulfoamides, sulfonimides and sulfinates (col. 3, lines 32-41).

Such plating additives compounds, which may be used singly or in suitable combinations, have one of more of the following functions:

(1) To obtain semi-lustrous deposits or to produce substantial grain-refinement over the usual dull, matter, grainy, non-reflective deposits from additive free baths.

(2) To act as ductilizing agents when used in combination with other additives such as primary brighteners.

(3) To control internal stress of deposits, generally by making the stress desirably compressive.

(4) To introduce controlled sulfur contents into the electrodeposits to desirably affect chemical reactivity, potential differences in composite coating systems, etc. thereby decreasing corrosion, better protecting the basis metal from corrosion, etc. (col. 3, lines 42-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method described by JP '693 with wherein the

electroplating bath comprises at least one acetylenic brightener because adding effective amounts of these brighteners to typical nickel-containing, cobalt-containing and nickel-cobalt-containing bath compositions would have provided the functions (1) to (4) as described above (col. 3, line 3 to col. 4, line 22).

d. Wherein a current density of about 1 ASF or more and about 500 ASF or less to the electroplating bath, as recited in claim 5.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of JP '693 by applying a current density of about 1 ASF or more and about 500 ASF or less to the electroplating bath because the current density is a result-effective variable and one skilled in the art has the skill to calculate the current density that would determine the success of the desired reaction to occur, absent evidence to the contrary. MPEP § 2141.03 and § 2144.05(b).

JP '693 teaches current densities of 0.1 A/dm², 1.0 A/dm² and 2.0 A/dm² (page 4, Table, "A/dm²").

e. Wherein the electroplating bath comprises about 10 g/l or more and about 150 g/l or more of ionic nickel, about 0.5 g/l or more and about 70 g/l or less or ionic cobalt, about 0.01 g/l or more and about 20 g/l or less of each of the ionic alloy metals, as recited in claim 6.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of JP '693 with wherein the electroplating bath comprises about 10 g/l or more and about 150 g/l or more of ionic nickel, about 0.5 g/l or more and about 70 g/l or less of ionic cobalt, about 0.01 g/l or more and about 20 g/l or less of each of the ionic alloy metals because changes in concentration is not a patentable modification; however, such changes may impart patentability to a process if the ranges claimed produce new and unexpected results which are different in kind and not merely in degree from results of the prior art, such ranges are termed "critical" ranges and Applicant has the burden of proving such criticality; even though Applicant's modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within capabilities of one skilled in the art; more particularly, where general conditions of the claim are disclosed in the prior art, it is not inventive to discover optimum or workable ranges by routine experimentation. *In re Aller*, 220 F2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) and MPEP § 2144.05.

JP '693 teaches different concentrations of the ionic metals in the electroplating baths (page 3, Table).

f. Wherein the quaternary alloy comprises about 2% by weight or less of components other than nickel, cobalt, and at least two alloy metals, as recited in claim 8.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of JP '693 with wherein the quaternary alloy comprises about 2% by weight or less of components other than nickel, cobalt, and at least two alloy metals because changes in concentration is not a patentable modification; however, such changes may impart patentability to a process if the ranges claimed produce new and unexpected results which are different in kind and not merely in degree from results of the prior art, such ranges are termed "critical" ranges and Applicant has the burden of proving such criticality; even though Applicant's modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within capabilities of one skilled in the art; more particularly, where general conditions of the claim are disclosed in the prior art, it is not inventive to discover optimum or workable ranges by routine experimentation. *In re Aller*, 220 F2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) and MPEP § 2144.05.

JP '693 teaches different concentrations of the ionic metals in the electroplating baths (page 3, Table).

II. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable **JP 10-245693** ('693) in combination with **Passal** (US Patent No. 3,697,391) as applied to claims 1-6, 8 and 24 above, and further in view of **Hui** (US Patent No. 6,372,118 B2).

JP '693 and Passal are as applied above and incorporated herein.

The method of JP '693 and Passal differs from the instant invention because they do not disclose wherein the anode comprises at least one of nickel, cobalt, at least one alloy metal, iridium oxide, platinum, titanium, graphite, carbon, and platinum-titanium.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of JP '693 with wherein the anode comprises at least one of nickel, cobalt, at least one alloy metal, iridium oxide, platinum, titanium, graphite, carbon, and platinum-titanium because it is conventional in the art to have used an anode made of the same material that is being electrodeposited. Thus, if nickel and cobalt are being electrodeposited, then a nickel anode and/or a cobalt anode would have been obvious to use.

Furthermore, JP '693 teaches electroplating a Ni-Fe-Co alloy (abstract; and page 1, [0007]), and Hui teaches a method of electroplating a Ni-Fe-Co alloy using nickel and iron anodes (col. 4, line 65 to col. 5, line 3). Thus, it would have been obvious to one having ordinary skill in the art to use nickel and iron anodes to electroplate a Ni-Fe-Co alloy.

Furthermore, it has been held that the selection of a known material based on its suitability for its intended use supports a prima facie obviousness determination. See MPEP § 2144.06 and § 2144.07.

III. Claims 9-12, 15-17 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-245693 ('693) in combination with Passal (US Patent No.

3,697,391).

JP '693 and Passal are as applied for the reasons as discussed above and incorporated herein.

JP '693 also teaches that the electroplating bath further comprises at last one organic brightener selected from the group consisting of ethylenic alcohols, coumarins, aldehydes, compounds containing a C≡N linkage, and heterocyclics (= aldehydes and N-heterocyclics) [abstract; page 1, [0007]; and page 1, claim 1].

The at least two ionic alloy metals comprise iron and boron in ionic form (abstract; page 1, [0007]).

The method of JP '693 differs from the instant invention because JP '693 does not disclose the following:

a. Wherein the electroplating bath comprises about 40 g/l or more and about 100 g/l or more of ionic nickel, about 1 g/l or more and about 30 g/l or less or ionic cobalt, about 0.05 g/l or more and about 10 g/l or less of each of the ionic alloy metals, as recited in claim 9.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of JP '693 with about 40 g/l or more and about 100 g/l or more of ionic nickel, about 1 g/l or more and about 30 g/l or less or ionic cobalt, about 0.05 g/l or more and about 10 g/l or less of each of the ionic alloy metals because changes in concentration is not a patentable

modification; however, such changes may impart patentability to a process if the ranges claimed produce new and unexpected results which are different in kind and not merely in degree from results of the prior art, such ranges are termed "critical" ranges and Applicant has the burden of proving such criticality; even though Applicant's modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within capabilities of one skilled in the art; more particularly, where general conditions of the claim are disclosed in the prior art, it is not inventive to discover optimum or workable ranges by routine experimentation. *In re Aller*, 220 F2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) and MPEP § 2144.05.

JP '693 teaches different concentrations of the ionic metals in the electroplating baths (page 3, Table).

b. Wherein a current density of about 10 ASF or more and about 200 ASF or less is applied to the electroplating bath, as recited in claim 10.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of JP '693 by applying a current density of about 10 ASF or more and about 200 ASF or less to the electroplating bath because the current density is a result-effective variable and one skilled in the art has the skill to calculate the current density that would determine the success of the desired reaction to occur, absent evidence to the contrary. MPEP § 2141.03 and § 2144.05(b).

JP '693 teaches current densities of 0.1 A/dm², 1.0 A/dm² and 2.0 A/dm² (page 4, Table, "A/dm²").

IV. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 10-245693** ('693) in combination with **Passal** (US Patent No. 3,697,391) as applied to claims 9-12, 15-17 and 25 above, and further in view of **SU 1544847** ('847).

JP '693 and Passal are as applied above and incorporated herein.

The method of JP '693 and Passal differs from the instant invention because they do not disclose wherein the electroplating bath further comprises a sulfo-betaine brightener.

SU '847 teaches that adding a betaine of 2-(4-pyridyl)ethanesulfonic acid to an acidic nickel or nickel-cobalt alloy electrolyte increases the hardness of their coatings (abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of JP '693 and Passal with wherein the electroplating bath further comprises a sulfo-betaine brightener because this would have increased the hardness of nickel and nickel-cobalt alloy coatings as taught by SU '847 (abstract).

Since there are minimal amounts of the at least two ionic alloy metals in the electroplating bath and the electrodeposited coating, it appears that there would have been a reasonable expectation of success to modify the electroplating bath of JP '693

by adding a sulfo-betaine brightener. MPEP § 2143.02.

V. Claims **18-23 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 10-245693** ('693) in combination with **Passal** (US Patent No. 3,697,391).

JP '693 and Passal are as applied for the reasons as discussed above and incorporated herein.

The method of JP '693 differs from the instant invention because JP '693 does not disclose the following:

- a. Wherein the electroplating bath further comprises at least one conductivity salt, as recited in claim 22.
- b. Wherein the conductivity salt is selected from the group consisting of boric acid, sodium sulfate, sodium chloride, potassium sulfate, and potassium chloride, as recited in claim 23.

Passal teaches using a bath compatible cation, such as a chloride ion, Cl⁻, in the bath; and using buffering components in addition to or in place of boric acid for buffering if necessary or desirable (col. 7, line 68 to col. 8, line 8).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of JP '693 with wherein the electroplating bath further comprises at least one conductivity salt; and wherein the conductivity salt is selected from the group consisting of boric acid, sodium sulfate, sodium chloride, potassium sulfate, and potassium chloride because such compounds

would have adjusted the pH of the bath to improve the tolerance of the bath to the metallic ions as taught by Passal (col. 7, line 68 to col. 8, line 8).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

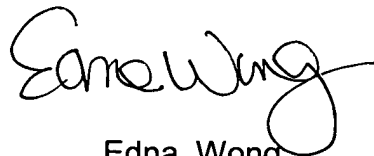
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Edna Wong
Primary Examiner
Art Unit 1753

EW
October 11, 2005